SURVEY OF EDUCATIONAL LEVELS, PROFESSIONAL REGISTRATION AND TECHNICAL COMPETENCY OF CP-18 CAREERISTS

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OBJECTIVES

- Obtain detailed profile of careerists in the CP-18 engineering and architectural series
- Compare CP-18 careerists to ASCE Body of Knowledge proposal: master’s degree or equivalent to qualify for registration

SURVEY METHOD

- First draft of survey obtained from ASCE
- Survey enhanced to gain additional information on CP-18 careerists
- Survey put on the Technical Excellence Network website by ERDC-ITL
- CP-18 career program managers in USACE, ACSIM and IMA asked to encourage their careerists to take the survey

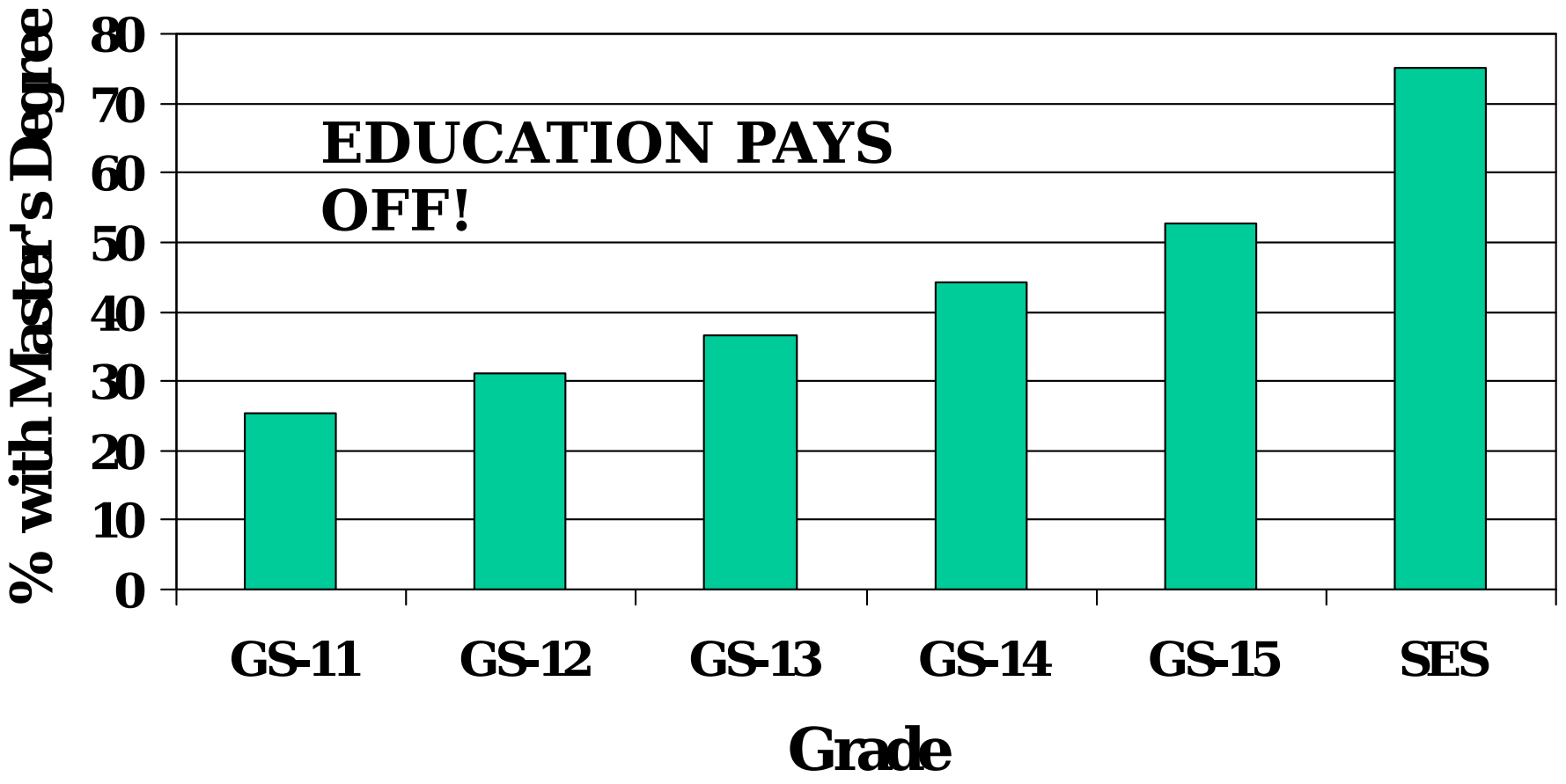
RESPONSE

- 2006 careerists responded = 20% of CP-18 population in engineering and architectural series
- Typical respondent:
  - Civil engineer (61% of respondents)
  - GS-12 (37% of respondents)
  - Engineering function (41% of respondents)
  - Team leader (21% of respondents)

EDUCATION

- Bachelor’s Degree: 94%, of which 60% are in civil engineering
- Master’s Degree: 35%, of which 44% are in civil engineering
  - 18% more have some master’s level courses
- Doctorate Degree: 3%, of which 66% are civil engineers
- Average of 27 semester credit hours of post-graduate non-university education (86% by PROSPECT)

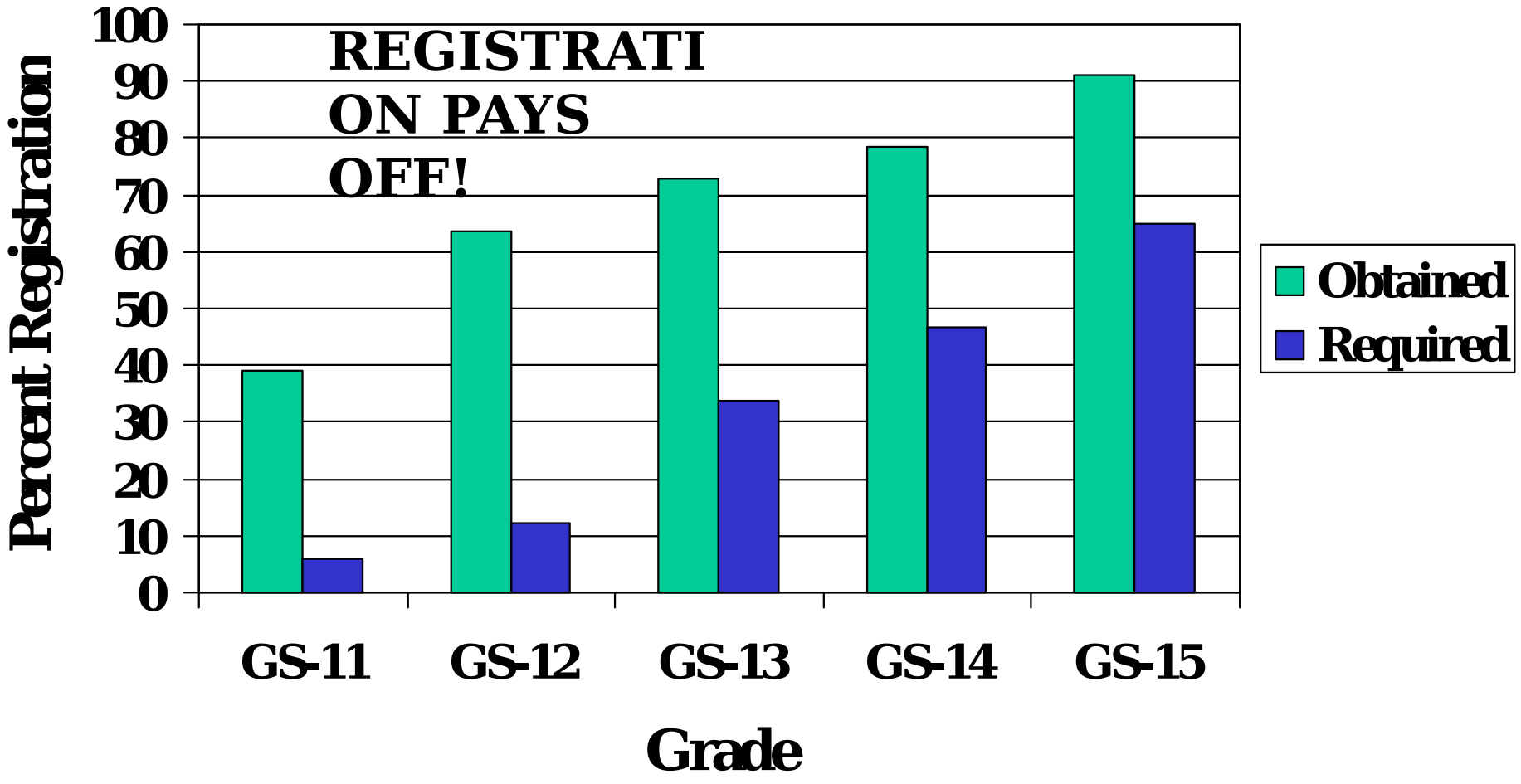
MASTER'S DEGREE VS. GRADE



PROFESSIONAL REGISTRATION

- 64% are registered! (compare to 20% of all engineers nation-wide per NSPE)
- Most are civil engineers (41% of all respondents)
- On average, registration was obtained 7.9 years after bachelor’s degree
- 23% of careerists are in a position requiring registration, and 53% of those positions are in engineering function

REGISTRATION VS. GRADE



REGISTRATION VS. MASTER'S DEGREE

- 27% of careerists are both registered and have a master's degree
- 42% of careerists that are registered have a master's degree
  - 65% of which had their master's degree before they obtain registration
- Hence, professional registration in USACE would be moderately impacted by the ASCE proposal
  - Master's coursework and non-university education would mitigate impact some

HIGHEST COMPETENCIES

- An ability to apply knowledge of mathematics, science and engineering
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- An ability to identify, formulate, and solve engineering problems
- A recognition of the need for, and an ability to engage in life-long learning
- An ability to apply knowledge in a specialized technical and/or professional area
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

EDUCATIONAL GAPS

- Program and Project Management
- Communications (Written and Oral)
- Acquisition, Contracting, Contract Administration, Contract Law
- Technical Courses - Various and Unspecified
- Leadership
- Management
- Team Building, Group Dynamics, Human Relations
- Construction, Construction Management
- Public Policy and Administration, Government, DoD/Army Policy
- Budgeting and Scheduling

SUMMARY

CP-18 architectural and engineering workforce:

- Is well educated – university and PROSPECT
- Has high level of professional registration
- Would be moderately impacted by requirement to require a master's degree for professional registration
- Has high level of competency in multiple areas
- Wants more training in PM, communications, contracting, technical subjects and leadership